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see page 6

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RAW SEQUENCE LISTING

DATE: 06/14/2002

PATENT APPLICATION: US/10/038,722

TIME: 08:43:15

Input Set : A:\LEY1B.txt

Output Set: N:\CRF3\06142002\J038722.raw

```

3 <110> APPLICANT: LEY, Arthur C.
4   GUTERMAN, Sonia K.
5   MARKLAND, William
6   KENT, Rachel B.
7   ROBERTS, Bruce L.
8   LADNER, Robert C.
10 <120> TITLE OF INVENTION: ITI-D1 KUNITZ DOMAIN MUTANTS AS nHE INHIBITORS
12 <130> FILE REFERENCE: LEY=1B
14 <140> CURRENT APPLICATION NUMBER: 10/038,722
15 <141> CURRENT FILING DATE: 2002-01-08
17 <150> PRIOR APPLICATION NUMBER: US 08/849,406
18 <151> PRIOR FILING DATE: 1999-07-21
20 <150> PRIOR APPLICATION NUMBER: PCT/US95/16349
21 <151> PRIOR FILING DATE: 1995-12-15
23 <150> PRIOR APPLICATION NUMBER: US 08/358,160
24 <151> PRIOR FILING DATE: 1994-12-16
26 <160> NUMBER OF SEQ ID NOS: 129
28 <170> SOFTWARE: PatentIn version 3.1
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31 <211> LENGTH: 276
32 <212> TYPE: DNA
33 <213> ORGANISM: Artificial Sequence
35 <220> FEATURE:
36 <223> OTHER INFORMATION: IIIspp::bpti::mautreIII (initial fragment)
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39 gtgaaaaaat tattattcgc aattccttta gttgttcctt tctattctgg cgcccggtccg      60
41 gatttctgtc tcgagccacc atacactggg ccctgcaaag cgcgcacatc ccgctatttc      120
43 tacaatgcta aagcaggcct gtgccagacc ttgtatacgt gtggttgccg tgctaagcgt      180
45 aacaacttta aatcgggcca agattgcatt cgtacctgcg gtggcgccgc tgaaactgtt      240
47 gaaagttggt tagcaaaacc ccatacagaa aattca                                276
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51 <211> LENGTH: 92
52 <212> TYPE: PRT
53 <213> ORGANISM: Artificial Sequence
55 <220> FEATURE:
56 <223> OTHER INFORMATION: IIIspp::bpti::mautreIII (initial fragment)
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61 1           5           10           15
64 Gly Ala Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys
65           20           25           30
68 Lys Ala Arg Ile Ile Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys
69           35           40           45

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```

72 Gln Thr Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys
73      50                      55                      60
76 Ser Ala Glu Asp Cys Met Arg Thr Cys Gly Gly Ala Ala Glu Thr Val
77 65                      70                      75                      80
80 Glu Ser Cys Leu Ala Lys Pro His Thr Glu Asn Ser
81                      85                      90
84 <210> SEQ ID NO: 3
85 <211> LENGTH: 285
86 <212> TYPE: DNA
87 <213> ORGANISM: Artificial Sequence
89 <220> FEATURE:
90 <223> OTHER INFORMATION: IIIsp::itiD1::mature III fusion gene
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93 gtgaaaaaat tattattcgc aattccttta gttgttcctt tctattctgg cgccaaagaa      60
95 gactcttgcc agctgggcta ctgggccggt ccctgcatgg gaatgaccag caggtatttc      120
97 tataatggtg catccatggc ctgtgagact ttccagtacg gcggctgcat gggcaacggt      180
99 aacaacttcg tcacagaaaa ggagtgtctg cagacctgcc gaactgtggg cgccgctgaa      240
101 actgttgaaa gttgttttagc aaaaccccat acagaaaatt cattt      285
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105 <211> LENGTH: 95
106 <212> TYPE: PRT
107 <213> ORGANISM: Artificial Sequence
109 <220> FEATURE:
110 <223> OTHER INFORMATION: IIIsp::itiD1::mature III fusion gene
112 <400> SEQUENCE: 4
114 Met Lys Lys Leu Phe Ala Ile Pro Leu Val Val Pro Phe Tyr Ser
115 1      5                      10                      15
118 Gly Ala Lys Glu Asp Ser Cys Gln Leu Gly Tyr Ser Ala Gly Pro Cys
119      20                      25                      30
122 Met Gly Met Thr Ser Arg Tyr Phe Tyr Asn Gly Thr Ser Met Ala Cys
123      35                      40                      45
126 Glu Thr Phe Gln Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Val
127      50                      55                      60
130 Thr Glu Lys Glu Cys Leu Gln Thr Cys Arg Thr Val Gly Ala Ala Glu
131 65                      70                      75                      80
134 Thr Val Glu Ser Cys Leu Ala Lys Pro His Thr Glu Asn Ser Phe
135      85                      90                      95
138 <210> SEQ ID NO: 5
139 <211> LENGTH: 58
140 <212> TYPE: PRT
141 <213> ORGANISM: Artificial Sequence
143 <220> FEATURE:
144 <223> OTHER INFORMATION: Consensus Kunitz domain
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148 Arg Pro Asp Phe Cys Leu Leu Pro Ala Glu Thr Gly Pro Cys Arg Ala
149 1      5                      10                      15
152 Met Ile Pro Arg Phe Tyr Tyr Asn Ala Lys Ser Gly Lys Cys Glu Pro
153      20                      25                      30
156 Phe Ile Tyr Gly Gly Cys Gly Gly Asn Ala Asn Asn Phe Lys Thr Glu

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160 Glu Glu Cys Arg Arg Thr Cys Gly Gly Ala
161      50          55
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165 <211> LENGTH: 58
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167 <213> ORGANISM: Bos Taurus
169 <400> SEQUENCE: 6
171 Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Lys Ala
172 1          5          10          15
175 Arg Ile Ile Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
176      20          25          30
179 Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser Ala
180      35          40          45
183 Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
184      50          55
187 <210> SEQ ID NO: 7
188 <211> LENGTH: 58
189 <212> TYPE: PRT
190 <213> ORGANISM: Artificial Sequence
192 <220> FEATURE:
193 <223> OTHER INFORMATION: Epi-HNE-1
195 <400> SEQUENCE: 7
197 Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Ile Ala
198 1          5          10          15
201 Phe Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
202      20          25          30
205 Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala
206      35          40          45
209 Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
210      50          55
213 <210> SEQ ID NO: 8
214 <211> LENGTH: 62
215 <212> TYPE: PRT
216 <213> ORGANISM: Artificial Sequence
218 <220> FEATURE:
219 <223> OTHER INFORMATION: Epi-HNE-2
221 <400> SEQUENCE: 8
223 Glu Ala Glu Ala Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly
224 1          5          10          15
227 Pro Cys Ile Ala Phe Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly
228      20          25          30
231 Leu Cys Gln Thr Phe Val Tyr Gly Cys Met Gly Asn Gly Asn Asn
232      35          40          45
235 Phe Lys Ser Ala Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
236      50          55          60
239 <210> SEQ ID NO: 9
240 <211> LENGTH: 58
241 <212> TYPE: PRT

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Input Set : A:\LEY1B.txt

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242 <213> ORGANISM: Artificial Sequence

244 <220> FEATURE:

245 <223> OTHER INFORMATION: EpiNE7

247 <400> SEQUENCE: 9

249 Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala

250 1 5 10 15

253 Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr

254 20 25 30

257 Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala

258 35 40 45

261 Glu Asp Cys Met Arg Thr Cys Gly Gly Ala

262 50 55

265 <210> SEQ ID NO: 10

266 <211> LENGTH: 58

267 <212> TYPE: PRT

268 <213> ORGANISM: Artificial Sequence

270 <220> FEATURE:

271 <223> OTHER INFORMATION: EpiNE3

273 <400> SEQUENCE: 10

275 Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Gly

276 1 5 10 15

279 Phe Phe Ser Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr

280 20 25 30

283 Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala

284 35 40 45

287 Glu Asp Cys Met Arg Thr Cys Gly Gly Ala

288 50 55

291 <210> SEQ ID NO: 11

292 <211> LENGTH: 58

293 <212> TYPE: PRT

294 <213> ORGANISM: Artificial Sequence

296 <220> FEATURE:

297 <223> OTHER INFORMATION: EpiNE6

299 <400> SEQUENCE: 11

301 Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Gly

302 1 5 10 15

305 Phe Phe Gln Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr

306 20 25 30

309 Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala

310 35 40 45

313 Glu Asp Cys Met Arg Thr Cys Gly Gly Ala

314 50 55

317 <210> SEQ ID NO: 12

318 <211> LENGTH: 58

319 <212> TYPE: PRT

320 <213> ORGANISM: Artificial Sequence

322 <220> FEATURE:

323 <223> OTHER INFORMATION: EpiNE4

325 <400> SEQUENCE: 12

RAW SEQUENCE LISTING

DATE: 06/14/2002

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Input Set : A:\LEY1B.txt

Output Set: N:\CRF3\06142002\J038722.raw

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327 Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
328 1          5          10          15
331 Ile Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
332          20          25          30
335 Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala
336          35          40          45
339 Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
340          50          55
343 <210> SEQ ID NO: 13
344 <211> LENGTH: 58
345 <212> TYPE: PRT
346 <213> ORGANISM: Artificial Sequence
348 <220> FEATURE:
349 <223> OTHER INFORMATION: EpINE8
351 <400> SEQUENCE: 13
353 Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
354 1          5          10          15
357 Phe Phe Lys Arg Ser Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
358          20          25          30
361 Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala
362          35          40          45
365 Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
366          50          55
369 <210> SEQ ID NO: 14
370 <211> LENGTH: 58
371 <212> TYPE: PRT
372 <213> ORGANISM: Artificial Sequence
374 <220> FEATURE:
375 <223> OTHER INFORMATION: EpINE5
377 <400> SEQUENCE: 14
379 Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Ile Ala
380 1          5          10          15
383 Phe Phe Gln Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
384          20          25          30
387 Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala
388          35          40          45
391 Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
392          50          55
395 <210> SEQ ID NO: 15
396 <211> LENGTH: 58
397 <212> TYPE: PRT
398 <213> ORGANISM: Artificial Sequence
400 <220> FEATURE:
401 <223> OTHER INFORMATION: EpINE2
403 <400> SEQUENCE: 15
405 Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Ile Ala
406 1          5          10          15
409 Leu Phe Lys Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
410          20          25          30

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/038,722

DATE: 06/14/2002
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Input Set : A:\LEY1B.txt
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:82; N Pos. 37,47,58,65

Seq#:83; Xaa Pos. 13,14,16,18,19,20,22,24,34,35,37,42,43,45

Seq#:84; N Pos. 34,44,55,62,101

Seq#:85; Xaa Pos. 12,13,15,17,18,19,21,23,33,34,36,41,42,44

Seq#:86; Xaa Pos. 2,3,4,5,6,7,9,11,12,13,14,15,16,17,18,19,20,21,22,23,24

Seq#:86; Xaa Pos. 25,27,28,30,31,32,35,36,37,38,39,40,42,43,44,45,46,48,49

Seq#:86; Xaa Pos. 50

Seq#:127; N Pos. 4,5,6,7,8

Seq#:128; N Pos. 4,5,6,7,8,9,10,11,12

VERIFICATION SUMMARY

DATE: 06/14/2002

PATENT APPLICATION: US/10/038,722

TIME: 08:43:16

Input Set : A:\LEY1B.txt

Output Set: N:\CRF3\06142002\J038722.raw

L:3014 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:0
L:3016 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:60
L:3117 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:83 after pos.:0
L:3121 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:83 after pos.:16
L:3125 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:83 after pos.:32
L:3172 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84 after pos.:0
L:3174 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84 after pos.:60
L:3276 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85 after pos.:0
L:3280 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85 after pos.:16
L:3284 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85 after pos.:32
L:3396 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86 after pos.:0
L:3400 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86 after pos.:16
L:3404 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86 after pos.:32
L:3408 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86 after pos.:48
L:4390 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:127 after pos.:0
L:4408 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:128 after pos.:0